

## CLAIMS

What is claimed is:

1. An inner-lock foldable joint comprising:

5 two base plates rotatably connected by a hinge, each base plate having a depression;

at least one groove disposed along an edge of one of the depressions;

10 at least one latching block moveably mounted in one of the depressions; and

a braking mechanism attached to the latching block for driving the latching block into or out of the groove; wherein when the latching block moves into the groove, the two base plates are in a latched state, and when the latching block is not in the groove, the two base plates are  
15 in an unlatched state.

2. The inner-lock foldable joint as claimed in claim 1 wherein the latching block has two flanges which are of a matched shape with the groove.

3. The inner-lock foldable joint as claimed in claim 1 wherein a  
20 groove is placed on two sides of the depression within the base plate, and the braking mechanism has one latching block capable of moving along

the groove.

4. The inner-lock foldable joint as claimed in claim 3 wherein the groove is placed on an opposite side from the hinge.

5. The inner-lock foldable joint as claimed in claim 3 wherein the  
5 groove is placed on the same side as the hinge.

6. The inner-lock foldable joint as claimed in claim 1 wherein at least one groove is placed on two sides of the depression within the base plate, and the braking mechanism has two slidable latching blocks.

7. The inner-lock foldable joint as claimed in claim 1 wherein the  
10 braking mechanism has a lever to enable a user to control the braking mechanism by operating the lever to move the latching block.

8. The inner-lock foldable joint as claimed in claim 1 wherein the braking mechanism further comprises:

a lever;

15 an eccentric wheel connected to one end of the lever;

a push rod, one end of the push rod connected to the latching block and another end abutting the eccentric wheel;

a stop plate fixed within the depression; and

a reposition spring placed on the push bar between the stop  
20 plate and the eccentric wheel;

wherein the eccentric wheel is capable of pushing the push rod to move

towards the groove so that the two base plates are in the latched state, and when the eccentric wheel moves away from the push rod, the reposition spring pulls back the push rod so that the latching block separates from the groove and the two base plates are in the unlatched state.

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